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Impacts of the Cellucci/ Swift Tax Reduction Proposal

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Executive Summary

Between 1989 and 1991, the Massachusetts Legislature "temporarily" raised the state income tax rate from 5.00% to 6.25% to address the crippling effects of the 1989-1991 recession. In 1991, Governor Weld and then Lieutenant Governor Cellucci thwarted attempts to make the 6.25% rate permanent, allowing it to fall to 5.95% in 1992. However, the Legislature has not reduced it back to its original rate of 5.00%, as had been promised at the time of the increase. The tax has remained at the higher rate despite widespread prosperity and consistent budget surpluses. The higher rate affects the Commonwealth across several areas:

1. **Competitiveness** – Massachusetts has high taxes and labor costs relative to the region, its industrial competitors and the nation. Reducing the personal income tax to 5.00% would make Massachusetts a more attractive place for businesses, bringing 15,000 to as many as 50,000 additional jobs to the state.

2. **Growth** – Higher marginal tax rates not only drive away new businesses but threaten continued economic growth by distorting economic decisions and creating what economists call "deadweight loss."

3. **Revenues** – The most important factor in increasing the Commonwealth's long-term revenues is the health of the economy. Over the past twenty years, every additional billion dollars in Massachusetts Gross State product has increased total state tax revenues by $58 million (almost half of which are generated by non-income taxes, such as the sales tax, which are highly sensitive to the health of the economy). Without a strong economy we will not have the tax revenues to pay for new and continuing programs, regardless of the personal income tax rate.

4. **Poverty** – The prolonged booming economy has reduced the unemployment rate to such a degree that even the least skilled workers in Massachusetts have had their employment prospects substantially improved. Businesses are willing to do the job training necessary to hire welfare recipients with no previous work experience because the job market is so tight. Yet such a tight labor market can push up labor costs. Continued economic expansion requires keeping the cost of hiring as low as possible, and reducing each worker's tax burden will aid in this effort.

5. **Keeping a Commitment** – The Governor and the Lieutenant Governor have vowed to return the income tax rate to 5.00% and hold the Legislature to its decade-old promise. If the Legislature fails to keep its promise, this will engender cynicism among the voters and distrust by the business community.

John Simon, Deputy Director of Research and Development, performed much of the analysis for this brief. He had assistance from Alvaro Pereira of the Division of Energy Resources and Robert M. Costrell, Director of Research and Development.

Impacts of the Cellucci/ Swift Tax Reduction Proposal

Between 1989 and 1991, the Massachusetts Legislature "temporarily" raised the state income tax rate from 5.00% to 6.25% to address the crippling effects of the 1989-1991 recession. In 1991, Governor Weld and then Lieutenant Governor Cellucci thwarted attempts to make the 6.25% rate permanent, allowing it to fall to 5.95% in 1992. However, the Legislature has not reduced it back to its original rate of 5.00%, as had been promised at the time of the increase. The tax has remained at the higher rate despite widespread prosperity and consistent budget surpluses. This report analyzes the effects of reducing the tax rate to 5.00% as proposed by Governor Cellucci and Lieutenant Governor Swift. It will look at these effects across five areas:

- **Competitiveness**
- **Economic Growth**
- **Tax Revenues**
- **Poverty**
- **Trust in Government**

Competitiveness

Taxes can be an important factor in determining the economic attractiveness of a state. While this may seem clear for business taxes, personal income and other non-business taxes also have an impact on a state's ability to attract and retain businesses. To the extent workers can pass the costs of such taxes onto their employers through higher wages, non-business taxes increase a state's labor costs and its costs of doing business. High personal taxes also may make business recruitment more difficult. Finally, employers may view generally high tax rates as an indication of a high-tax, less business-friendly environment.[1]

A 1997 review of the economic literature on state and local taxes found that 60% (23 of 38) of the studies of the effects of total taxes on aggregate economic activity report a statistically significant effect.[2] Timothy Bartik of the Upjohn Institute for Employment Research estimates that tax elasticity, which is the measure of the percent change in economic activity with respect to percent change in taxes, ranges from –0.1 to –0.6 (meaning that a ten percent cut in taxes would raise economic activity by between 1% and 6%). With regard to personal taxes, the literature is limited, but two studies have found that states with higher personal taxes have lower employment growth. Ernest Goss and Joseph Phillips found that a one percent increase in the average household tax burden correlated to a 1.88% decrease in employment growth.[3] Michael Wasylenko and Therese McGuire found that high effective personal income tax rates negatively affected employment in the trade and finance industries.[4]

Analysis of Massachusetts' situation using a large-scale econometric model developed by Regional Economic Models, Incorporated (REMI) suggests a reduction in the tax rate from 5.95% to 5.00% would increase long-term employment by about 15,000 - 25,000 jobs, depending on how such a reduction would affect government spending. A single-equation regression analysis based on Massachusetts' own experience over the past thirty years indicates that every

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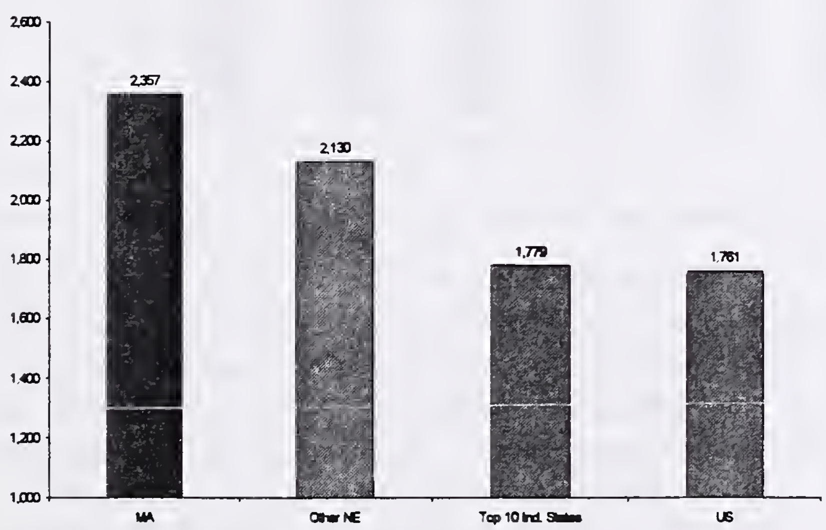
[1] It should also be noted that for Subchapter S corporations, partnerships, and sole proprietorships, the personal income tax rate is also the corporate rate. In 1996, there were 58,720 S corporations in Mass.
[2] "Taxation and Economic Development: The State of the Economic Literature" Michael Wasylenko, *The New England Economic Review*, March/April 1997
[3] "State Employment Growth: The Impact of Taxes and Economic Development Spending" Ernest Preston Goss, Jospeh M. Phillips, *Growth and Change*, Summer 1994, v. 25, n. 3
[4] "Jobs and Taxes: the Effect of Business Climate on State's Employment Growth Rates" Michael Wasylenko and Therese McGuire, *National Tax Journal*, 1983, v. 38

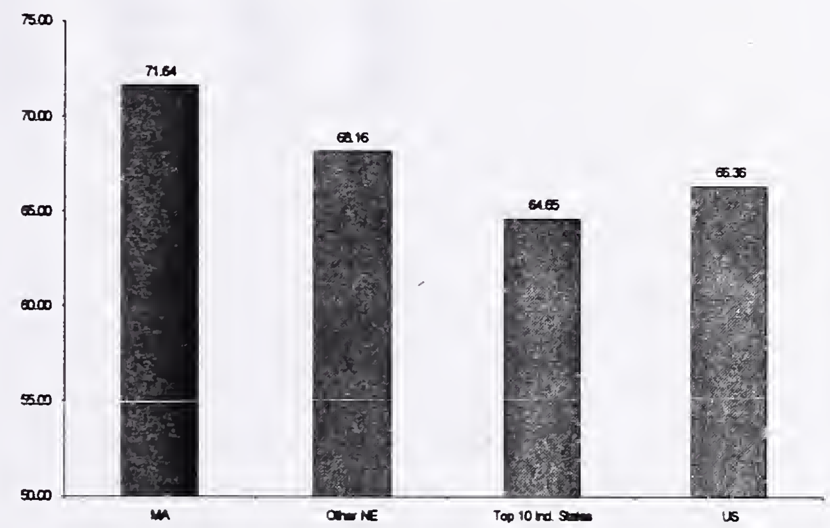
percentage point decrease in the personal income tax rate is associated with a gain of approximately 50,000 jobs, controlling for regional employment and prior year employment levels.[5]

Massachusetts' high tax levels magnify the effects of its economic policy. As the charts below indicate, its taxes per capita and per $1,000 of personal income are high relative to the nation, the region, and its industrial competitors. Compared to the other five states with flat personal income tax structures, Massachusetts' rate is the highest.[6] Says Michael Wasylenko: "A large deviation from the average tax level, multiplied by the tax elasticity, will yield a large location, employment, or investment effect." Deloitte & Touche location consultant Robert Ady has stated that states must be "reasonably competitive" across all tax categories to avoid elimination from a firm's site selection process.[7]

Taxes Per Capita



Taxes Per $1,000 Personal Income



Source: US Census Bureau, Fiscal Year 1997-98

Massachusetts' high tax position is exacerbated by Massachusetts' high labor and energy costs. Overall, Regional Financial Associates (RFA) estimates that Massachusetts has the second highest costs of doing business in the nation. While the Cellucci/ Swift Administration has taken steps to reduce these costs through Worker's Compensation Reform, Unemployment Insurance Reform, and Electricity Deregulation, reducing the state personal income tax rate would help maintain our state's economic competitiveness. This is particularly true given the fierce competition for business within New England and the Boston metropolitan region. In recent years both Rhode Island and New Hampshire have successfully pursued Massachusetts-based businesses.

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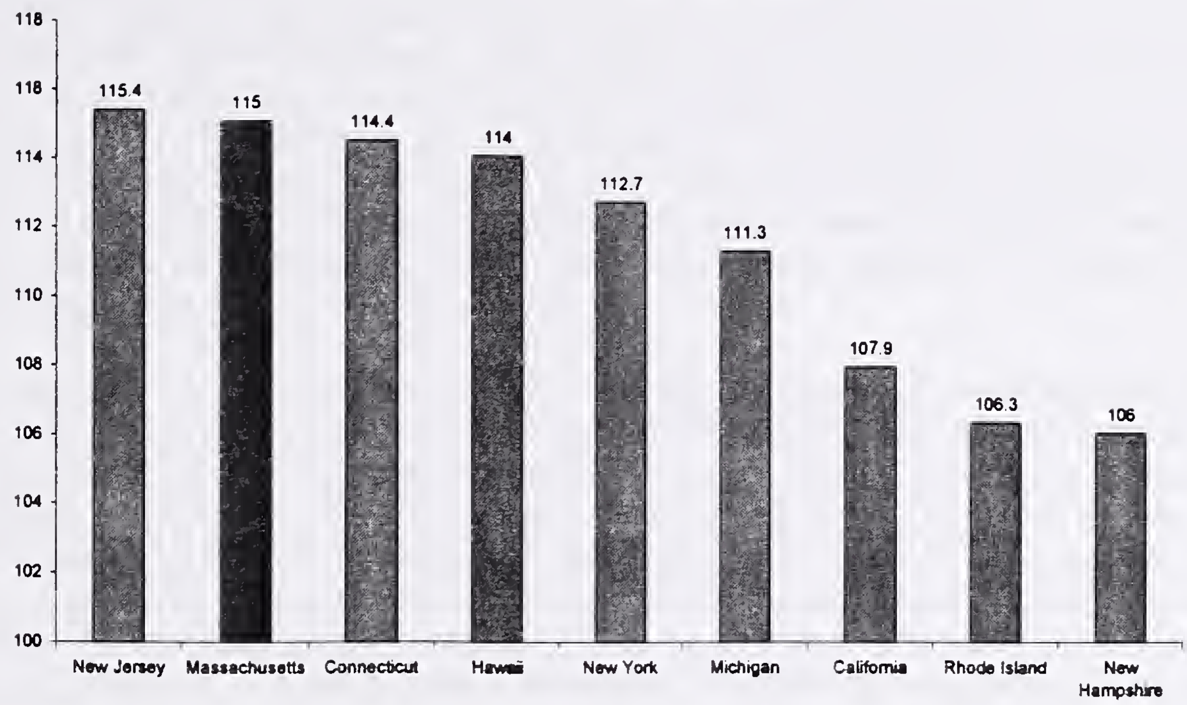
[5] See Table 1 for Regression Output. The analysis performed for this brief uses Mass. historical annual data. Although the cross-sectional studies cited above provide more direct evidence on the competitive effects of taxes across states, there are also benefits to the present analysis. Specifically, changes in the marginal tax rate are consistently measured across time in a way not available in states without flat taxes. Thus cross-section analyses often use measures of tax receipts, rather than rates, a practice that incurs potentially more serious problems of simultaneity than our analysis.

[6] The Federation of Tax Administrators

[7] Robert Ady, Symposium on the Effects of State and Local Public Policies on Economic Development, *The New England Economic Review*, March/April 1997. Mr. Ady does note that once a state achieves a minimum threshold of competitiveness, taxes play a lesser role in determining site selection.

Top Ten Highest Cost States



Source: RFA, 1998. The RFA Cost of Doing Business Index is based 75% on labor costs, 15% on energy costs, and 10% on taxes.

The fact that firms in both states can access the Boston consumer and labor market greatly increases this threat. Wasylenko notes that "intra-regional studies produce tax elasticities that are quadruple or more those found in the interregional studies."[8] This means if businesses can locate in different states within the same metropolitan area, as they can in the Boston and Providence metropolitan areas, taxes play a much greater role in determining business location. Of the eleven studies of intra-regional location decisions identified by Wasylenko, nine report statistically significant tax effects.[9] Timothy Bartik of the Upjohn Institute for Regional Employment Research estimates intra-regional elasticities at between –1.0 and -3.0.[10]

Economic Growth

By becoming more competitive, Massachusetts will attract businesses to the state and increase its economic growth potential. A reduction in the personal income tax rate will increase economic growth in other ways as well. **Lower costs of doing business for existing Massachusetts firms will allow them to increase production, hire more workers, and sell more products. Lower taxes also mean individuals will have more money to spend and more incentives to save – increasing demand for goods and capital for investment. Finally, lower tax rates increase the returns to entrepreneurship, thereby promoting greater risk-taking and innovation.** Economists call the negative effects of higher marginal tax rates "Deadweight Loss." Due to these effects, lower income tax rates are correlated to higher growth. Analyses by the World Bank confirm this with respect to countries.[11] Studies of the effect of taxes on economic growth in states tend to support this result.[12]

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[8] "Taxation and Economic Development: The State of the Economic Literature" Michael Wasylenko, The New England Economic Review, March/April 1997

[9] Ibid

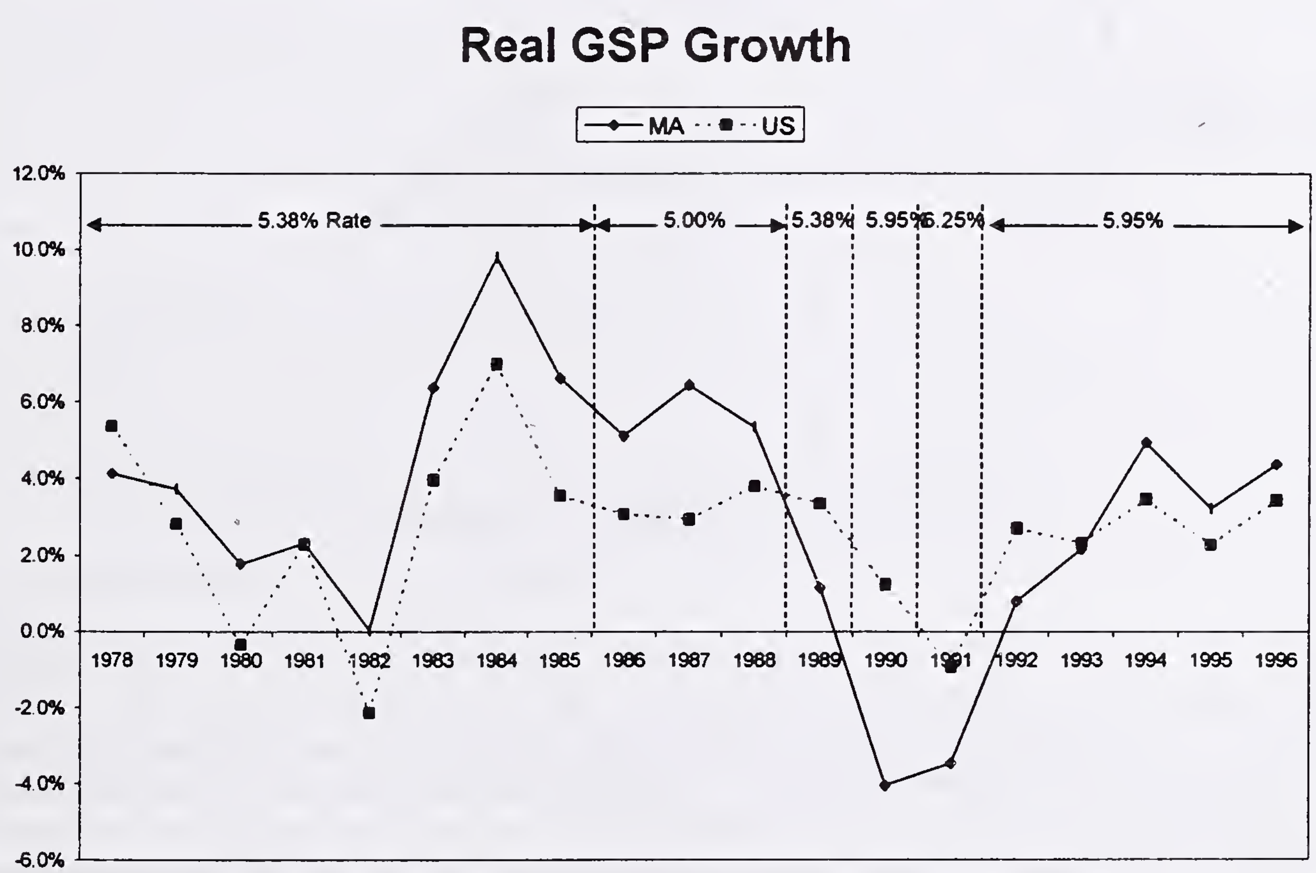
[10] Timothy Bartik, Symposium on the Effects of State and Local Public Policies on Economic Development, *New England Economic Review*, March/ April 1997

[11] "Taxation and Economic Development: The State of the Economic Literature" Michael Wasylenko, *The New England Economic Review*, March/April 1997

[12] Ibid

The REMI model predicts a reduction in the Massachusetts personal income tax rate to 5.00% will increase Gross State Product (GSP) and total personal income by about \$0.4 – \$1.2 billion in the short-term based on demand-side effects only and \$1 - \$2 billion in the long-term due to demand-side and supply-side effects. A time series regression model based on Massachusetts own experience indicates that every percentage point drop in the Massachusetts income tax rate has been associated with an additional \$12 billion in GSP, controlling for external factors like changes in the overall national economy. The effect with regard to personal income is smaller (about \$4.5 billion) but still statistically significant.[13] Future research is needed to explain the disparity between the REMI model and the regression result, as well as other research, though both analyses report positive economic effects.

Part of the explanation of this disparity may be that the legislature has historically raised taxes during recessions to compensate for lost revenue. Such an approach clearly characterized the 1989-1991 recession. Thus the apparent impact of tax rates on GSP observed in the time series regression may reflect low GSP causing higher taxes instead of the reverse (i.e. reverse causation or simultaneity).[14] However, it is also likely that higher taxes imposed during recessions further increase their severity. As the graph below indicates, when Massachusetts raised its taxes in the late 1980s, its economy moved from growing at a pace well above the national average to falling significantly below it. **Reducing taxes now should soften the impact of any future recession.**



Source: Bureau of Economic Analysis

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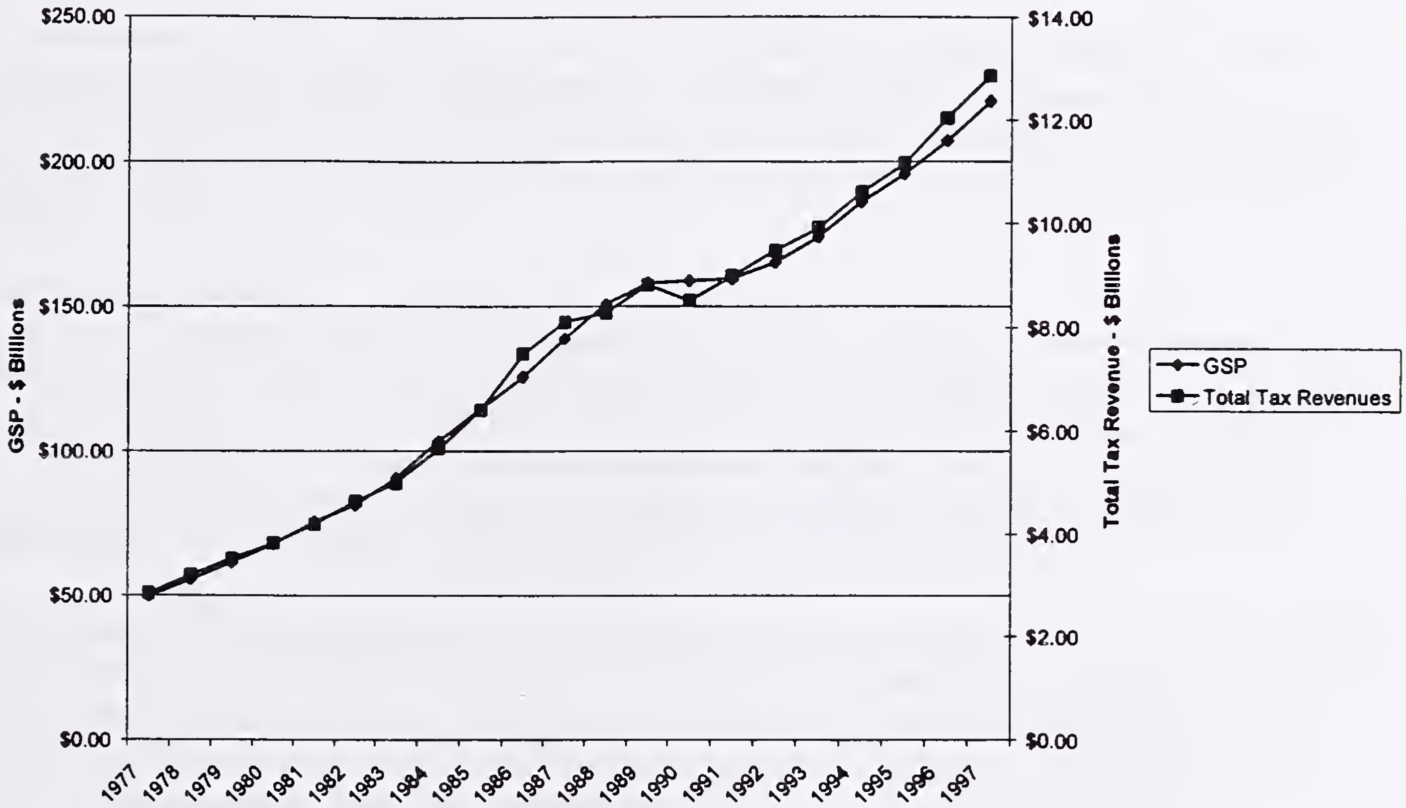
[13] See Table 2 for Regression Analysis Output. We also looked at personal income data on a quarterly and annual basis, and used several other variables to correct for any omitted variable bias. In all cases the analysis proved robust, with the coefficient on tax rate rarely changing significantly.

[14] To attempt to account for simultaneity bias, we used the prior year's tax rate and the prior year's general fund balance as instrumental variables for the current rate. This approach produced significant results when the dependent variable was GSP, but not when the dependent variable was GSP growth.

Tax Revenues

A reduction in income taxes will reduce Commonwealth revenues in the short-term. However, in the long-term **the most important factor in determining the state's revenues is the size of its economy.** Based on the past twenty years, every billion dollars in additional GSP increases state revenues by $58 million. This result is statistically very tight. The graph below illustrates the strong relationship between GSP and tax collections. By comparison, changes in the income tax rate have unpredictable effects on the long-term revenues of the Commonwealth. This is because only about half the state's revenues come from the income tax. Sales taxes, corporate taxes, and other taxes highly sensitive to the health of the economy account for the other 46% of state revenues. While an income tax reduction should reduce income tax revenues, other revenues would be likely to increase.[15]

Total State Tax Collections Vs. GSP



Source: Bureau of Economic Analysis, Dept. of Revenue

Today we have a budget surplus to help fund the short-term revenue loss a tax cut would entail. We also have more than $1.1 billion in the Stabilization Fund, $1.7 billion in the Unemployment Insurance Trust Fund, and $128 million in the Welfare Caseload Mitigation Fund, so that we can weather a short-term revenue loss due to recession. In fact, the Center on Budget and Policy Priorities named Massachusetts as one of only eight states that could bridge the gap between revenues and spending caused by a recession similar to the 1989-1992 recession without any tax increase or spending cuts.[16] In the long-term, we have pressing needs in education, social

[15] While we found a positive relationship between the income tax rate and income tax revenues in some regressions, we more consistently found a statistically significant *inverse* relationship between the tax rate and non-income tax revenues. As a result of these conflicting effects, we were unable to isolate any statistically significant effect of income tax rates on *total* tax revenue in our time series regressions, using quarterly and annual data from 1969 onwards.

[16] "When it Rains, It Pours" Center on Budget and Policy Priorities, March 11, 1999

services, and infrastructure. **Only by growing our tax base as effectively as possible can we ensure we have the economic wherewithal to afford the demands of these vital areas.**

Poverty

While only about half the filers in Massachusetts with gross income below $20,000 have a tax liability, a lower rate is a critical element in allowing families to escape poverty. **A report by Richard Freeman of Harvard University and William Rodgers of the College of William and Mary indicates that sustained low unemployment rates dramatically increase the probability of less skilled individuals finding employment.**[17] The report estimates that every percentage point drop in unemployment increases the probability of getting a job by 1.5% to 2.3% for non-college educated young men and by 3.0% to 3.5% for non-college educated young black men. Moreover, the employment prospects of such workers are much more sensitive to economic changes than their more skilled counterparts. Thus failure to maintain full employment will harm the least skilled and poorest workers the most.

As has been noted above, a lower tax rate is a significant contributor to job growth and a growing Gross State Product. GSP growth is a significant factor in reducing the unemployment rate. Aside from increasing job opportunities, low unemployment increases the wages of the lowest skilled young workers, by about 2% for every percentage point drop in the unemployment rate.[18]

Trust in Government

At the time the income tax rate was increased from 5.00%, the Legislature clearly intended the increases to be a temporary measure to help the state through an economic crisis. House Speaker George Keverian told the Boston Globe on July 4, 1989, that he would "continue to work on a temporary tax package for fiscal 1989, but added that permanent taxes are not currently being considered by the leadership."[19] "This is a temporary tax, eighteen months in duration," said Representative Angelo Scaccia during the debate in the House on July 6, 1989.[20]

Today, thanks to fiscal discipline and several billion dollars in tax reductions, the Commonwealth has resolved its crisis. We have retired the $1.4 billion in emergency fiscal recovery debt and have realized cumulative surpluses in excess of $2 billion as of the close of fiscal year 1998. Failure to keep the Commonwealth commitment of 1989 will engender cynicism among the voters of Massachusetts. More important from an economic standpoint, investors and businesspeople will view the Commonwealth's tax policy as uncertain. Tax policy uncertainty damages both investment and growth. This is illustrated by a cross-sectional analysis of 46 developing countries over the 1970-85 period by Dartmouth College researchers that found a negative correlation between such uncertainty and investment and growth.[21] In Massachusetts, this suggests that future economic development initiatives will have less credibility with the business community, and therefore less effect, if we do not keep our policy commitments.

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[17] "Area Economic Conditions and The Labor Market Outcomes of Young Men in the 1990s Expansion" Richard B. Freeman and William M. Rodgers, National Bureau of Economic Research, 1999

[18] Ibid

[19] "From House Leaders, Word of a New Tax Plan" *The Boston Globe,* July 4, 1989

[20] State House News Service

[21] "Policy Uncertainty, Persistence and Growth" Joshua Aizenman and Nancy P. Marion, Review of International Economics, volume 1, No. 2 (June 1993), pp. 145-63.

Conclusion

Maintaining Massachusetts' economic health is the most important task state government faces. Reducing our income tax rate is a necessary element of any long-term economic strategy. Doing so will enhance our competitiveness, increase our long-term growth, assist the most vulnerable of our citizens, and safeguard the economic progress we have made over the past seven years. A phased-in reduction to 5.00% will also keep faith with the millions of Massachusetts citizens who struggled through the earlier years of this decade to lay the foundations for our current economic prosperity.

Appendix

Table 1: Massachusetts Personal Income Taxes and Employment (Dependent Variable: Total Massachusetts Non-Agricultural Employment)

	Regression 1	Regression 2
Income Tax Rate	-51,401 (9,165)	-53,159 (10,149)
New England Employment	0.48 (0.027)	0.44 (0.006)
Prior Year Employment	-0.083 (0.061)	-
N	31	31

Table 2: Massachusetts Personal Income Taxes and Gross State Product (Dependent Variable: Real Gross State Product)

	Ordinary Least Squares	Instrumental Variable Estimates Using Lagged Rate for Current Rate	Instrumental Variable Estimates Using Prior Year General Fund Balance for Current Rate
Income Tax Rate	-11,800,000,000 (1,630,000,000)	-14,100,000,000 (2,180,000,000)	-12,300,000,000 (2,780,000,000)
Real US GDP	0.0251 (0.0022)	0.0247 (0.0024)	0.0210 (0.0036)
Prior Year Real GSP	0.3393 (0.0638)	0.3580 (0.0688)	0.3359 (0.0995)
Defense Spending as a Percent of GDP	3,820,000,000 (831,000,000)	3,180,000,000 (962,000,000)	1,860,000,000 (1,450,000,000)
Durbin-Watson Statistic	2.248	2.189	2.193
N	20	20	17